

**LOCKHEED MARTIN**



April 24, 2002

Mr. Kamron Saremi, P.E.  
Associate Water Resources Control Engineer  
California Regional Water Quality Control Board  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, CA 92501-3339

Dear Mr. Saremi:

This letter proposes revisions to the Redlands Plume Sampling plan required as part of the 94-37 and 01-56 Cleanup and Abatement Orders Water Supply Contingency Plans (WSCP). This plan increases both the geographic coverage and the number of wells sampled for perchlorate and reduces the sampling frequency for TCE. This change responds to the recent lowering of the Provisional Action Level (PAL) for perchlorate.

The objective of the proposed revised sampling program is to assure that all VOC and perchlorate concentrations can be forecasted with sufficient accuracy to maintain the Municipal water systems integrities.

Municipal water system wells in the path of the Redlands plume that currently exceed or are anticipated to exceed the new perchlorate PAL are included in the revised sampling. In the event a well shows an anomalous change in perchlorate concentration a confirmatory sample will be collected and the sampling frequency may be revised.

The frequency of sampling for TCE is being revised in consideration of the gradual nature of changes in TCE concentrations that have been observed over the past four years. As with perchlorate, anomalous changes in TCE concentration in a well will trigger confirmatory re-sampling and may result in a change in sampling frequency.

Two attached logic diagrams (Figure 2 for perchlorate and Figure 7 for TCE) show the decision process to be used for determining which wells are sampled, the frequency of sampling and the logic for collecting confirmatory samples. Attached Tables 1 and 2 and comparison sheet offer WSCP Sampling Frequency Tables, shows the revised list of wells to be sampled, recent concentration data, current sampling frequency and the proposed sampling frequency for perchlorate and TCE.

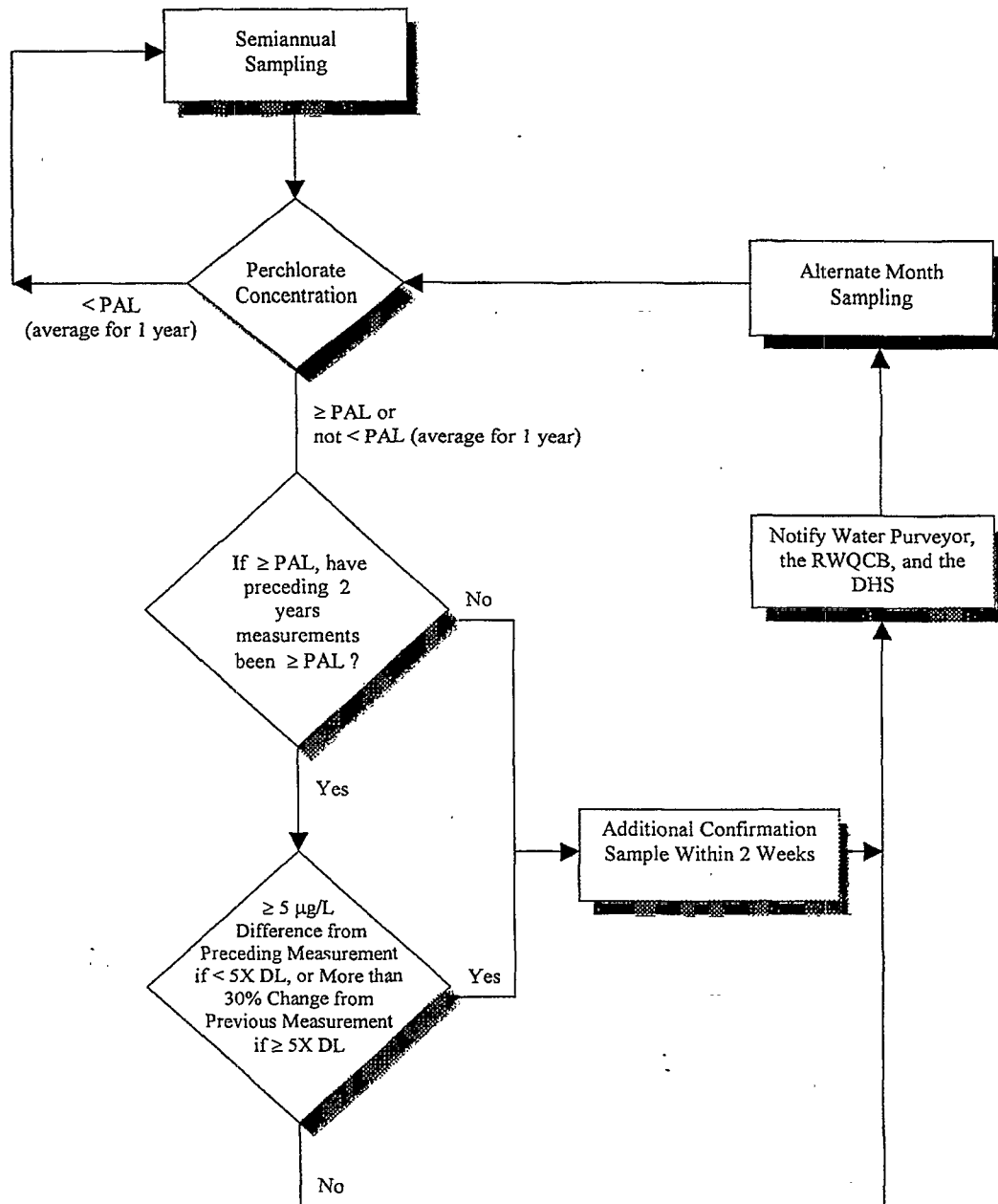
Lockheed Martin requests to begin using the proposed plan for the May 2002 sampling effort and will appreciate your timely review to that end. Should you have any questions or comments, please contact Bob Simpson at (909) 778-6046.

Sincerely,

Gene Matsushita  
Technical Projects Manager

Attachments: Decision Matrix for Sampling Production Wells for Perchlorate  
Decision Matrix for Sampling Production Wells for TCE  
WSCP Sampling Frequency Table

C: Kim Alexander, Psomas Engineering  
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Kalyanpur Baliga, Department of Health Services (San Bernardino)  
Mary Bridgewater, Department of the Air Force, AFBCA  
W. William Bryden, City of San Bernardino  
Tom Crowley, San Bernardino Valley Water Conservation District  
Dodie Farmer, Victoria Farms Mutual Water Company  
Douglas Headrick, City of Redlands  
Ross Lewis, Gage Canal Company  
Steve Mains, Western Municipal Water District  
Morris Matson, Loma Linda University  
Kevin Mayer, US EPA (Region IX)  
Eugene McMeans, Riverside Highland Water Company  
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Greg Snyder, City of Loma Linda  
Glen Thomas, Mountain View Power Company  
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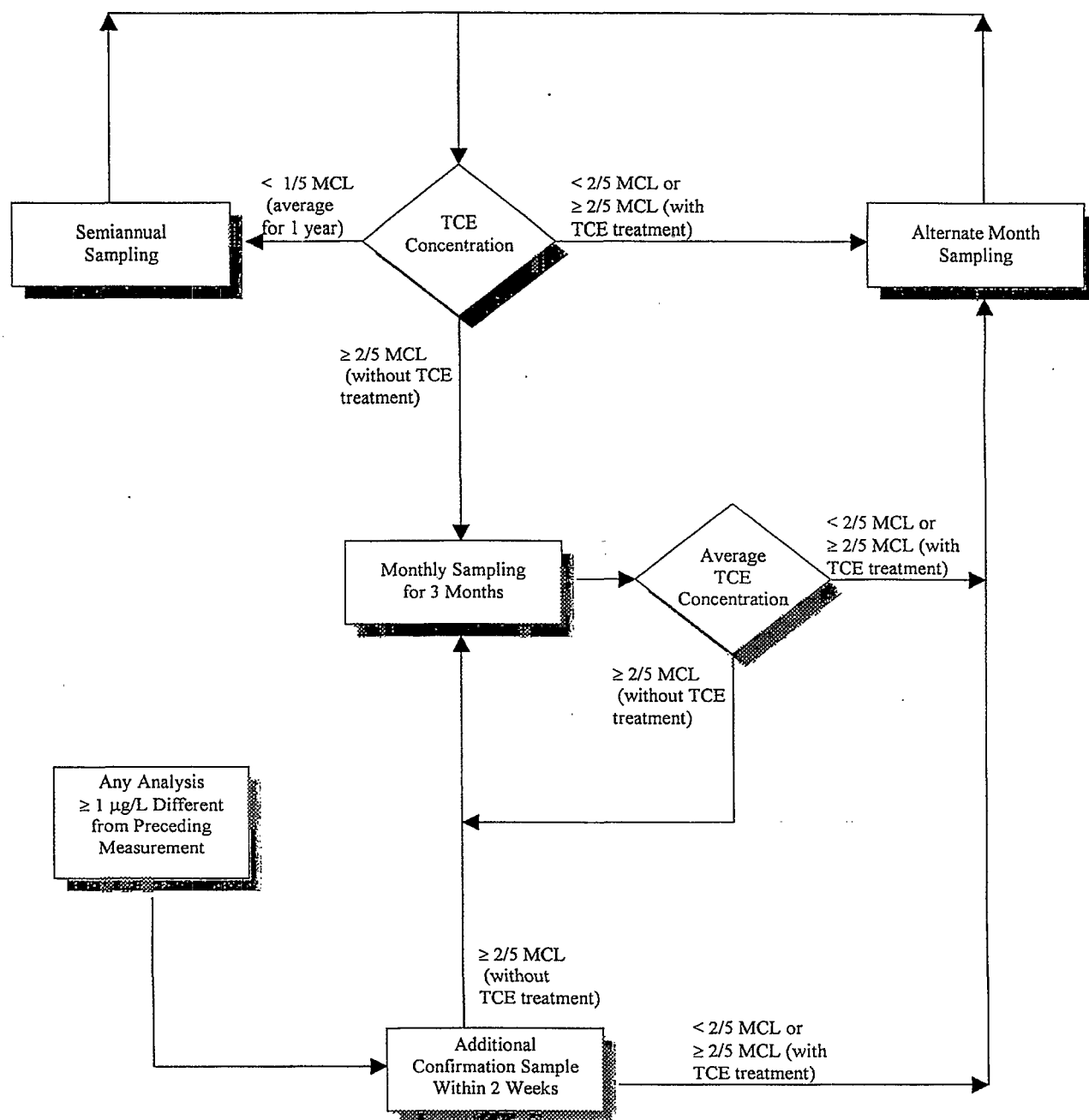


**Footnote:**

Blending points for finished water will be monitored monthly to ensure the concentration of perchlorate is less than 4 µg/L.

Perchlorate Provisional Action Level (PAL) = 4 µg/L (California Department of Health Services, January 2002)

Decision Matrix for Sampling Production Wells for Perchlorate		
Date 02-02	Lockheed Martin Corp.	Figure 2
Project No. 52773.0304	EARTH TECH <small>A SPACE INTERNATIONAL LTD. COMPANY</small>	



**Footnote:**

Blending points for finished water will be monitored monthly to ensure the concentration of TCE is less than 5 µg/L.

TCE Maximum Contaminant Level (MCL) = 5 µg/L (California Regulations, Title 22, Division 4, Chapter 15, Section 64444)

**Decision Matrix for Sampling  
Production Wells for TCE**

Date 02-02	Lockheed Martin Corp.	Figure 7
Project No. 52773.0304	EARTH TECH <small>A TCEC INTERNATIONAL LTD. COMPANY</small>	

TABLE 2  
WSCP SAMPLING FREQUENCY

Well Number	Well Name	PERCHLORATE				TRICHLOROETHENE (TCE)			
		Recent Measurement Date	Concentration	Current Frequency	Proposed Frequency	Recent Measurement Date	Concentration	Current Frequency	Proposed Frequency
City of Loma Linda									
3106	Mountain View #3	1/3/02	ND (4.0)	Quarterly	Semiannual	1/3/02	ND (0.5)	Quarterly	Semiannual
3171	Mountain View #4	2/5/02	ND (4.0)	Quarterly	Semiannual	2/5/02	ND (0.5)	Quarterly	Semiannual
693	Richardson #1	2/5/02	5.7	Twice monthly	Even Months	2/5/02	ND (0.5)	Twice/month	Monthly
707	Richardson #3	1/3/02	ND (4.0)	Quarterly	Semiannual	1/3/02	ND (0.5)	Quarterly	Semiannual
3132	Richardson #4	1/3/02	ND (4.0)	Quarterly	Semiannual	1/3/02	ND (0.5)	Quarterly	Semiannual
2967	Mountain View Blend - Lawton	2/5/02	ND (4.0)	Monthly, Blend point	Monthly, Blend point	2/5/02	ND (0.5)	Monthly, Blend point	Monthly, Blend point
2968	Richardson Blend	2/5/02	ND (4.0)	Monthly, Blend point	Monthly, Blend point	2/5/02	ND (0.5)	Monthly, Blend point	Monthly, Blend point
Southern California Edison									
554	SCE #2 (AUX)	11/2/01	ND (4.0)	Quarterly	Semiannual	11/2/01	ND (0.5)	Quarterly	Semiannual
Loma Linda University									
267	LL Univ Anderson #2	2/5/02	6.7	Monthly	Odd Months	8/2/00	ND (0.5)	NA	NA
717	LL Univ Anderson #3	2/5/02	4.7	Monthly	Even Months	8/2/00	ND (0.5)	NA	NA
City of Riverside (Gage System)									
252	Gage #26-1	2/15/02	7.9	Monthly	Even Months	2/15/02	7.4	Monthly	Even Months
258	Gage #27-1	2/4/02	7.0	Monthly	Odd Months	2/4/02	1.8	Monthly	Odd Months
259	Gage #27-2	2/15/02	10	Monthly	Odd Months	2/15/02	ND (0.5)	Quarterly	Semiannual
260	Gage #29-1	2/15/02	9.0	Monthly	Even Months	1/15/02	ND (0.5)	Quarterly	Semiannual
219	Gage #29-2	1/15/02	19	Twice Monthly	Odd Months	1/2/02	4.2	Monthly	Odd Months
220	Gage #29-3	1/15/02	38	Twice Monthly	Odd Months	1/2/02	5.1	Monthly	Odd Months
218	Gage #30-1	2/4/02	ND (4.0)	Quarterly	Semiannual	2/4/02	ND (0.5)	Quarterly	Semiannual
214	Gage #31-1	2/4/02	ND (4.0)	Monthly	Even Months	2/4/02	ND (0.5)	Quarterly	Semiannual
215	Gage #46-1	2/4/02	6.1	Monthly	Odd Months	2/4/02	ND (0.5)	Quarterly	Semiannual
253	Gage #51-1	12/3/01	42	Twice monthly	Odd Months	12/3/01	2	Twice/month	Monthly
216	Gage #56-1	2/4/02	ND (4.0)	Quarterly	Semiannual	2/4/02	ND (0.5)	Quarterly	Semiannual
257	Gage #66-1	2/15/02	14	Twice monthly	Even Months	2/15/02	1.3	Monthly	Even Months
644	Gage #92-1	2/15/02	15	Twice monthly	Even Months	2/15/02	1.3	Twice monthly	Monthly
641	Gage #92-2	1/2/02	ND (4.0)	Quarterly	Semiannual	1/2/02	ND (0.5)	Quarterly	Semiannual
642	Gage #92-3	1/15/02	ND (4.0)	Quarterly	Odd Months	1/15/02	ND (0.5)	Quarterly	Semiannual
3091	Gage #98-1	1/2/02	ND (4.0)	Quarterly	Semiannual	1/2/02	ND (0.5)	Quarterly	Semiannual
City of Riverside (Waterman System)									
271	Hunt #10	10/1/01	ND (4.0)	Monthly	Odd Months	7/28/00	ND (0.5)	NA	NA
272	Hunt #11	9/5/01	5.9	Monthly	Odd Months	7/28/00	ND (0.5)	NA	NA
273	Hunt #6	10/2/01	6.2	Monthly	Even Months	7/28/00	ND (0.5)	NA	NA
285	RIV Garner 1	11/18/98	ND (4.0)	NA	Odd Months	9/10/99	ND (0.5)	NA	NA
286	RIV Garner 2	12/8/98	ND (4.0)	NA	Odd Months	6/16/99	ND (0.5)	NA	NA
284	RIV Garner 5	10/16/98	ND (4.0)	NA	Odd Months	7/29/99	ND (0.5)	NA	NA

**Notes:**

Concentrations in ug/L

If a well is not available for sampling in a designated month, the well will be sampled in the following month, if active

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

**TABLE 2**  
**WSCP SAMPLING FREQUENCY**

Well Number	Well Name	PERCHLORATE (P)				TRICHLOROETHENE (TCE)			
		Recent Measurement Date	Concentration	Current Frequency	Proposed Frequency	Recent Measurement Date	Concentration	Current Frequency	Proposed Frequency
City of Riverside (Waterman System)									
1908	RIV Garner 6	10/7/98	ND (4.0)	NA	Even Months	7/29/99	ND (0.5)	NA	NA
2576	RIV Garner 7	9/23/99	ND (4.0)	NA	Even Months	6/4/99	ND (0.5)	NA	NA
254	RIV Raub 2	2/9/00	ND (4.0)	NA	Even Months	8/25/99	ND (0.5)	NA	NA
224	RIV Raub 3	8/3/00	ND (4.0)	NA	Odd Months	8/3/00	ND (0.5)	NA	NA
255	RIV Raub 4	8/3/00	ND (4.0)	NA	Odd Months	8/3/00	ND (0.5)	NA	NA
222	RIV Raub 5	7/28/00	ND (4.0)	NA	Even Months	8/15/00	8.8	NA	NA
666	RIV Raub 6	7/28/00	ND (4.0)	NA	Odd Months	7/28/00	ND (0.5)	NA	NA
665	RIV Raub 8	7/28/00	ND (4.0)	NA	Even Months	7/28/00	ND (0.5)	NA	NA
202	RIV Scheuer	12/8/98	ND (4.0)	NA	Even Months	9/3/99	ND (0.5)	NA	NA
282	RIV Stiles	4/4/00	8.0	NA	Odd Months	8/19/99	ND (0.5)	NA	NA
249	RIV Warren 1	10/26/00	5.1	NA	Even Months	10/26/00	ND (0.5)	NA	NA
247	RIV Warren 4	9/25/00	ND (4.0)	NA	Odd Months	9/25/00	ND (0.5)	NA	NA
2946	Iowa Booster (Waterman)	2/4/02	ND (4.0)	Monthly, Blend point	Monthly, Blend point	2/4/02	ND (0.5)	Monthly, blend point	Monthly, blend point
2947	Gage Delivery (Gage)	2/4/02	4.2	Monthly, Blend point	Monthly, Blend point	2/4/02	ND (0.5)	Monthly, blend point	Monthly, blend point
2948	7th & Chicago (Reservoir)	2/4/02	4.0	Monthly, Blend point	Monthly, Blend point	2/4/02	ND (0.5)	Monthly, blend point	Monthly, blend point
3018	Gage Arlington	2/4/02	7.1	Monthly, Blend point	Monthly, Blend point	NA	NA	NA	NA
City of Redlands									
542	COR Church St	10/2/01	5.0	Monthly	Odd Months	6/7/99	ND (0.5)	NA	NA
535	COR Mentone Acres	2/5/02	ND (4.0)	Quarterly	NA	7/28/98	ND (0.5)	NA	NA
1029	COR Mission	6/5/01	11	NA	Odd Months	8/18/99	ND (0.5)	NA	NA
29	COR Orange St	1/3/02	ND (4.0)	Quarterly	Semiannual	7/27/00	ND (0.5)	NA	NA
74	COR Rees	11/1/01	6.6	Monthly	Odd Months	10/2/01	ND (0.5)	Quarterly	Semiannual
65	COR Well #31A	7/17/01	71	NA	Even Months	9/5/00	2.4	NA	NA
265	COR Well #34	6/5/01	8.0	NA	Even Months	7/28/00	ND (0.5)	NA	NA
71	COR Well #35	5/21/01	23	NA	Odd Months	8/3/99	3.4	NA	NA
75	COR Well #37	5/23/01	ND (4.0)	NA	Even Months	7/29/99	ND (0.5)	NA	NA
2673	COR #38	2/15/02	ND (4.0)	Quarterly	Semiannual	8/3/00	ND (0.5)	NA	NA
Riverside Highlands									
1354	RHWC #2	9/14/00	8.8	NA	Even Months	9/14/00	ND (0.5)	NA	NA
1361	RHWC Flow #5	9/14/00	ND (4.0)	NA	Even Months	9/14/00	1.5	NA	NA
383	RHWC River&Highgrove #18	9/14/00	7.4	NA	Odd Months	9/14/00	ND (0.5)	NA	NA
Other Wells - Agricultural									
82	New York St Well	5/16/00	13	NA	Even Months	8/9/99	ND (0.5)	NA	NA
81	COR Well #41	8/13/01	12	NA	Odd Months	9/5/00	5.2	NA	NA
3174	VA Hospital Well	10/5/00	14	NA	Even Months	10/5/00	ND (0.5)	NA	NA

**Notes:**

Concentrations in ug/L

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Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2